In the Claims

Please replace all prior versions, and listings, of claims in the application with the following list of claims:

1. (Currently Amended) A method for the accelerated production of transgenic animals homozygous for a selected trait comprising:

transfecting a non-human mammalian cell or cell-line with a given transgene construct containing at least one DNA encoding a desired gene;

selecting a cell or cell line~~(s)~~ in which the desired gene has been inserted into the genome of that cell or cell-line;

performing a first nuclear transfer procedure using the selected cell or cell line as donor nuclei or donor cell nucleus, to generate a first transgenic animal heterozygous for the desired gene;

characterizing the genetic composition of said first heterozygous transgenic animal;

selecting cells homozygous for the desired transgene through the use of a selective agent;

characterizing surviving cells or cell colonies ~~using known molecular biology methods~~;

~~and~~

picking surviving cells or cell colonies ~~cells~~ for use in a second round of nuclear transfer or embryo transfer; and

producing a second transgenic animal homozygous for a desired transgene.

2. (Original) The method of claim 1, wherein said first transgenic animal is biopsied so as to characterize the genome of said first transgenic animal.

3. (Currently Amended) The method of claim 2, wherein ~~the~~ cells ~~or cell line~~ biopsied from said first transgenic animal is expanded through cell culture techniques.

4. (Currently Amended) The method of claim 1, wherein said surviving cells or cell colonies are characterized by ~~one of several known molecular biology methods including without limitation~~ FISH, Southern Blot, or PCR.

5. (Currently Amended) The method of claim 1, wherein the homozygous transgenic animal[[s]] ~~are more quickly~~is developed for xenotransplantation purposes or developed with humanized Ig loci.

6. (Currently Amended) The method of claim 1, wherein said non-human mammalian cell or cell line ~~donor differentiated mammalian cell to be used as a source of donor nuclei or donor cell nucleus~~ is from an ungulate.

7. (Currently Amended) The method of claim ~~1 or~~ 6, wherein ~~said donor cell or donor cell nucleus is from an~~the ungulate is a ~~selected from the group consisting of~~ bovine, ovine, porcine, equine, caprine ~~and~~or buffalo.

8. (Currently Amended) The method of claim 1, wherein said non-human mammalian cell or cell line ~~donor differentiated mammalian cell to be used as a source of donor nuclei or donor cell nucleus~~ is ~~from~~ an adult non-human mammalian somatic cell.

9. (Currently Amended) The method of claim 1, wherein said non-human mammalian cell or cell line is a rodent cell or cell line.

10. (Currently Amended) The method of claim 1, wherein said non-human mammalian cell or cell-line ~~donor differentiated mammalian cell to be used as a source of donor nuclei or donor cell nucleus~~ is a non-quiescent somatic cell ~~or a nucleus isolated from said non-quiescent somatic cell~~.

11-13. (Canceled)

14. (Currently Amended) The method of claim 1, further comprising using a second selective agent.

15-16. (Canceled)

17. (Currently Amended) The method of claim 1, wherein cytocholasin-B is not used ~~in the cloning protocol~~.

18-21. (Canceled)

22. (Original) The method of claim 1, wherein the desired gene codes for a biopharmaceutical protein product.

23. (Currently Amended) The method of claim 22, wherein said biopharmaceutical protein product is ~~a compound selected from the group consisting of:~~ antithrombin III, lactoferrin, urokinase, PF4, alpha-fetoprotein, alpha-1-antitrypsin, C-1 esterase inhibitor, decorin, interferon, ferritin, transferrin conjugates with biologically active peptides or fragments thereof, human serum albumin, prolactin, CTFR, blood factor X, blood Factor VIII~~, as well as~~or a-monoclonal antibody~~ies~~.

24. (Original) The method of claim 1, wherein the DNA construct containing the desired gene is actuated by at least one beta casein promoter.

25. (Canceled)